

## GEOREFERENCING YOUR BASEMAP TO YOUR AERIAL PHOTOGRAPH

### Importing CAD Files

- Open ArcView and a new view and add no data.
- Go to the menu and choose VIEW and properties. Set the map units and distance units to match your aerial photograph (ex. feet for stateplane NAD27)

### Load the CAD Reader Extension

1. From the Project Menu Bar, choose "File" and release on "Extensions"
  2. Click the "Cad Reader" extension box and check it.
  3. If the image is a Mr. SID image also check MR. SID Image support
  4. Click OK
- Add the aerial photograph to the view by selecting ADD THEME, navigate to the location of the aerial photograph, select data source type: Image data source and click OK.

### Create a World File for a DXF drawing

- Obtaining real world coordinates
  1. Use a mapping grade GPS unit to find the real world coordinates of the site. You will need two points: the northwest corner and the southeast corner.
  2. Another way to do this is to use the aerial photograph. Move the cursor over the northwest corner (upper left) of the studysite and record the coordinate points shown in the upper right hand corner of the project window. Ex. 2094012.67,738295.77
  3. Move the cursor over the southeast corner of the studysite (lower right) and record the coordinate points shown in the upper right hand corner of the project window. Ex. 2094089.20,738290.44
  4. Using the aerial photograph will require you to use visual cues to determine its real world location
  5. Open a text editor by going to start, accessories, NOTEPAD.
  6. On line one type 0,10 and your northwest real world coordinates and on line two type 10,0 and your southeast real world coordinates

For example:    0,10 2094012.67,738295.77

                  10,0 2094089.20,738290.44

7. Save as base.wld and note the location. Be sure that the SAVE AS type is on ALL FILES.

**Note:** The first pair of X,Y coordinates are in page units. The second X,Y coordinates are real world coordinates determined from the GPS or the aerial photograph.

### **Attach the World file to the .DXF file (CAD file)**

1. Download the base.dxf file from the studysite website. Remember the location where you saved the file.
2. From the View Menu Bar, choose "View" and release on "Add Theme..."
3. Navigate to where you saved the file.
4. Open the "base.dxf" folder. Be sure to only click one time to open the folder.
5. Double click on "line".
6. Turn the "base.dxf" theme on and make sure it is active.
7. From the View Menu Bar, choose "Theme" and release on "Properties..."
8. Click on the "Drawing" icon.
9. In the "Transformation" box, click on "World File".
10. Use the "Browse" button to navigate to the location where you saved the world file from the previous section.
11. Double click on "base.wld".
12. Click OK.
13. On the View Button Bar, click "Zoom to Active Theme".

**Notice:** Once the world file is assigned to the theme, the theme seems to disappear. However, when the Zoom to Full Extent button is used, the View zooms to the correct coordinate space.

### **Convert the base.dxf Theme to a Shapefile**

1. Make the "base.dxf" theme active.
2. From the View Menu Bar, choose "Theme" and release on "Convert to Shapefile..."
3. Navigate to a place where you would like to save it. Name it the file a different name (ex. projbase.shp) and save the shapefile
4. Add the new shapefile to the View.
5. Turn the base.dxf theme off.
6. Turn the "projbase.shp" theme on and make it active.